



AMENDMENTS

In the Claims:

Please cancel claim 35 without prejudice.

Please amend claims 12, 23, 30, 33, 34, 45, 47, and 48 as follows.

12. (Amended) A folding knife, comprising:

a handle defining a blade cavity and a first end;

a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the blade is substantially within said blade cavity; and

a longitudinally extending plunger having:

a first end slidably and pivotably connected to said handle for longitudinal and/or pivotal movement of said plunger relative to said handle as said blade moves between said retracted and extended positions, wherein said first end is free from lateral movement relative to said handle, as said blade moves between said retracted and extended positions; and

a second end opposite said first end, said second end of said plunger pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended positions.

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23. (Amended) A folding knife, comprising:

a handle defining a blade cavity and a first end;

a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the blade is substantially within said blade cavity; and

a plunger including a spring, the plunger pivotally connected to the blade, the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point.

30. (Amended) A folding knife comprising:

a handle;

a blade pivoted on said handle via a blade pivot for movement between stowed and deployed conditions relative to the handle; and

a plunger including an elongate, force-transmitting biasing spring, where the plunger is operatively coupled with the blade for orbital movement of a portion of the plunger about the blade pivot, and the spring is operatively interposed said handle and said blade, where said spring exhibits both a rise and a fall in the biasing force carried through the spring when the blade is moved from one of the stowed condition and the deployed condition to the other of the stowed condition and the deployed condition.

33. (Amended)

A folding knife comprising:

a handle;

a blade pivoted on said handle for movement between stowed and deployed conditions relative to the handle;

an elongate, force-transmitting biasing spring operatively interposed said handle and said blade, said spring, with movement of said blade generally from either one of such two conditions toward the other condition, exhibiting both a rise and a fall in the biasing force carried through the spring;

a plunger operatively interconnecting the spring to the blade; and

a safety member connected to said handle for movement between a locking position and an unlocking position; said safety member defining an engagement portion projecting into the path of movement of said plunger for contacting said plunger.

34. (Amended) A folding knife comprising:

a handle;

a blade pivoted on said handle for movement between stowed and deployed conditions relative to the handle; and

an elongate, force-transmitting biasing spring having an effective length, the spring operatively attached to said blade, where said spring exhibits both an increase and a decrease in the effective length of the spring, as said blade is moved generally from one of the stowed condition and the deployed condition toward the other condition,

wherein the spring exhibits the decrease in effective length, as said blade is moved from one of the stowed and the deployed conditions toward an intermediate point between the stowed and the deployed conditions, followed by the increase in effective length, as said blade is moved from the intermediate point toward the other condition.

35. Cancelled.

45. (Amended) A knife comprising:

a handle;

a blade pivotally held in the handle to move about a blade pivot, such that the blade moves between a stowed position and a deployed position; and

a spring operatively connected between the blade to the handle, wherein the spring operates on the blade to maintain the blade in the stowed position when the blade is moved to the stowed position, and operates on the blade to urge the blade toward the deployed position when the blade is moved by an outside force from the stowed position at least partially toward the deployed position.

47. (Amended) A knife comprising:

a handle;

a blade pivotally held in the handle to move between a stowed position and a deployed position;

a spring operatively interconnecting the blade to the handle, wherein the spring operates on the blade to maintain the blade in the stowed position when the blade is moved to the stowed position, and operates on the blade to urge the blade toward the deployed position when the blade is moved by an outside force from the stowed position at least partially toward the deployed position;

a plunger operatively interconnecting the spring to the blade; and

a safety member connected to said handle for movement between a locking position and an unlocking position; said safety member defining an engagement portion projecting into the path of movement of said plunger for contacting said plunger.

48. (Amended) A knife comprising:

a handle;

a spring movably held in the handle; and

a blade pivotally held in the handle by a pin, the blade pivotal between a stowed position and a deployed position,

wherein the spring is operatively connected to the blade at a point that moves with the blade as the blade moves from the stowed position to the deployed position, and wherein the spring is operatively connected to the blade to exert a directional force on the blade that is in line with the pin when the blade is in at least one position as it moves from the stowed toward the deployed position, wherein the directional force operates on the blade to urge the blade toward the deployed position when the blade is moved by an outside force from the stowed position at least partially toward the deployed position.

Status of Claims and Support for Claim Changes

Prior to this amendment, claims 1-31, 33-37, 45, and 47-50 were pending. By this amendment, claim 35 is cancelled and claims 12, 23, 30, 33, 34, 45, 47, and 48 are amended. Thus, by this amendment, claims 1-31, 33-34, 36-37, 45, and 47-50 are pending. Please note that claims 12-31, 33-34, 36-37, 45, and 47-50 were newly added claims submitted with the reissue application.

Explanation of Support in Disclosure for Amendments

Each of the amendments presented in this paper is supported in the original disclosure. Below is a discussion of substantive amendments.

Applicant has amended claim 12 to recite that the first end of the plunger is “pivotably connected” to the handle for “pivotal movement” of the plunger. Such amendment is supported in the original disclosure as illustrated in Figs. 4A-4C, which show that the first end of plunger assembly E is pivotally connected to handle A and pivotally moves as blade B is moved from the stowed condition to the deployed condition, or vice-versa. Additionally, the original disclosure states that plunger assembly E pivots during movement of the blade between the stowed and deployed conditions (col. 5, lns. 27-29).

Claim 12 also was amended to recite that the first end is “free from lateral movement relative to said handle, as said blade moves between retracted and extended positions.” That amendment is supported in the original disclosure as illustrated in Figs. 4A-4C, which show that the first end of plunger assembly E longitudinally and/or pivotally moves relative to the handle but does not laterally move relative to that handle.

Additionally, applicant has amended claim 34 to recite that the spring exhibits a decrease in effective length followed by an increase in effective length, as the blade is moved from the stowed condition to the deployed condition, or vice-versa. Such amendment is supported in the original disclosure as illustrated in Figs. 4A-4C, which show that spring 90 undergoes a decrease in effective length until an intermediate point, shown in Fig. 4B, after which spring 90 undergoes an increase in effective length, shown in Figs. 4A and 4C. Additionally, the original disclosure states that “spring 90 is at various states of compression as blade B moves between the retracted and extended positions” (col. 5, lns. 29-31).

Moreover, applicant has amended claim 45 to delete the limitation regarding the plunger. That amendment is supported in the original disclosure as illustrated in Figs. 4A-4C, which show spring 90 operatively connected between blade B and handle A. Additionally, the original disclosure states that “spring 90 is at various states of compression as blade B moves between the retracted and extended positions” (col. 5, lns. 29-31).

Finally, applicant has amended claim 48 to delete the limitation “at least approximately” and “but while the blade is closer to the stowed position than to the deployed position” in referring to the directional force exerted by the spring on the blade. Such amendment is supported in the original disclosure as illustrated in Fig. 4B, which shows that the spring’s directional force on the blade is in line with pivot pin 56 between the two blade positions illustrated in Fig. 4B. Additionally, the original disclosure states that end 87 of plunger assembly E tends to “orbit” about pivot pin 56 (col. 4, lns. 59-60), which further supports that the spring’s directional force becomes in line with pivot pin 56 intermediate the two blade positions illustrated in Fig. 4B.